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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,127	08/08/2003	Nachappa Gopalsami	ANL-IN-02-083	3832

7590 11/03/2005

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EXAMINER	
LEVKOVICH, NATALIA A	
ART UNIT	**PAPER NUMBER**
1743	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/637,127	GOPALSAMI ET AL.	
	Examiner	Art Unit	
	Natalia Levkovich	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *13-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

(19)

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendments and remarks dated 08/15/2005 have been acknowledged by the Examiner and entered.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in the prior Office Action.

3. Claims 1-2 and 8-12 are rejected under 35 U.S.C. 102(b) as anticipated by any of Nagata et al. (USP 6,496,018) or Tews et al. (USP 5,397,993).

With respect to claims 1 and 8-12, see the discussion in paragraph 6 of the 06/29/2005 Office Action.

Referring to claim 2, Nagata discloses a method for measuring dielectric constant comprising:

providing a dielectric resonator;

detecting resonance patterns by "varying the dielectric constant and thickness of the standard sample ...; the variation of the resonance frequency ['resonant frequency shift' – Examiner] of the dielectric resonator ...) is measured for each varied dielectric

constant and thickness [/ concentration – Examiner] to draw a calibration curve of the varied resonance frequency depending on the dielectric constant and thickness';

using the obtained patterns for material detection: "The dielectric constant of the sample is found from the measurement value and the calibration curve. The dielectric constant of not only a sheetlike sample but also a three-dimensional molded article or a liquid sample can be measured easily"-See Abstract.

Tews discloses a method for "determining the moisture content of the material of a test object using microwaves. The properties of a resonator such as resonance frequency, resonance half-width value and amplitude of the resonance can be measured using a ... microwave generator. By special processing of the variations in the results due to detuning of the resonator when it is being filled with a product, the moisture content of the material in the product can be measured exactly, independently of the density of the material and largely independently of the type of material and of changes in additives... In addition, there are no special requirements concerning the shape of the sample"(Abstract).

4. Claims 1-2 and 8-12 are rejected under 35 U.S.C. 102(e) as anticipated by Scott (20020005725).

In regards to claims 1 and 8-12, see the discussion in paragraph 7 of the 06/29/2005 Office Action.

As to claim 2, Scott discloses microwave spectroscopy methods for substance characterization related to determination of the range of dielectric constant change in a medium. In particular, "frequencies resonant cavity techniques" have been disclosed,

when a sample "is placed in a resonant cavity to measure the loss and frequency shift with a external microwave frequency source that can be swept across the resonance with and without the sample in the cavity"(See [0047], [0066]).

The claimed methods include the step of developing calibration curves necessary for determination of the analytes, for example, the techniques are used to identify analyte concentrations (See [0063],[0210], [0218]).

Claim Rejections - 35 USC § 103

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (20020005725) in view of Lautenschlager (USP 5,382,414).

See the appropriate paragraphs of the 06/29/2005 Office Action.

6. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (20020005725) in view of Madaras et al. (US 20030012867).

See the appropriate paragraphs of the 06/29/2005 Office Action.

Response to Arguments

7. Applicant's arguments dated 08/15/2005 have been fully considered but they are not persuasive.

Applicant argues that the claimed method can be employed for detecting substances 'in all forms of matter" and includes the use of 'right excitation frequency' which 'is not shown, nor suggested in the prior art.

The Examiner disagrees. The resonant frequency shift method is well known in the art and used for analysis of fluids and solids. For example, the method of Nagata *supra* is based on resonant frequency shift and employed for detecting liquids and solid substances (see paragraph 3 of the instant Office Action).

Examiner notes that claim 2 was not rejected in the previous Office Action. This was an inadvertent error and claim2 is not considered allowable over the prior art of record. Rejection of claim 2 is set forth in this Office Action.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 8 a.m.-4p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jill Warden
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Technology Center 1700